

REMARKS

Responsive to the first requirement for restriction, applicants hereby elect the claims of Group I, namely claims 1-15 for examination in the instant application. This election is made without traverse. Non-elected claims 16-32 are hereby canceled without prejudice to, or disclaimer of, applicants' rights to prosecute the subject matter thereof in an appropriate divisional application.

Responsive to the second requirement for restriction, which seeks restriction between the sequences listed in the claims, applicants hereby provisionally elect the protein sequence set forth in SEQ ID NO:4. This provisional election is made with traverse, and reconsideration and withdrawal of the requirement are respectfully requested.

The second requirement is traversed because polypeptide or protein sequences meet the requirements set forth in *In re Harnish* for a proper Markush group in that they (1) share a common utility and (2) share a substantial structural feature essential to that utility. With regard to the first factor of common utility, all of the protein sequences are described as sodium-dependent phosphate co-transporters. With regard to the second factor, all of the protein sequences exhibit an extremely high degree of sequence identity. SEQ ID NO:2 differs from SEQ ID NO:4 by only one single amino acid out of 560 (Ala at position 327 instead of Asp). Similarly SEQ ID NO: 6 differs from SEQ ID NO:8 by only a single amino acid out of 560 (Val at position 528 instead of Ala). SEQ ID NO:6 differs from SEQ ID NO:2 by only 9 amino acids of 560, and SEQ ID NO:8 differs from SEQ ID NO:2 by only eight amino acids out of 560. Similarly SEQ ID NO: 12 differs from SEQ ID NO:14 by only two amino acids out of 582 (Ser at position 568 instead of Gly, and Ser at position 574 instead of Thr) and from SEQ ID NO:10 by only 13 amino acids out of 582. SEQ ID NO:10 is 100% identical to SEQ ID NO:2 over the 60 amino acid stretch from Gly410 to

Lys469 (amino acids 402 to 461 of SEQ ID NO:2), 100% identical to SEQ ID NO:2 over the 44 amino acid stretch from Phe306 to Gly349 (amino acids 298 to 341 of SEQ ID NO:2, and 100% identical to SEQ ID NO:2 over the 56 amino acid stretch from Thr162 to Thr217 (amino acids 154 to 209 of SEQ ID NO:2), as well as being approximately 88% identical over the 458 amino acid stretch from Asp61 to Phe518 (amino acids 53 to 510 of SEQ ID NO:2). The claimed proteins encoded by the polynucleotides of SEQ ID NOs: 1, 3, 5, 7, 9, 11 and 13 are the respective polypeptides of SEQ ID NOs: 2, 4, 6, 8, 10, 12 and 14. In view of this common utility and common structure, a Markush grouping of the respective protein sequences is believed proper, and the provisions of M.P.E.P. §803.02 are applicable. Therefore, the Examiner is respectfully requested to withdraw the second restriction requirement and treat the foregoing provisional election of SEQ ID NO:4 as an election of species in accordance with the provisions of M.P.E.P. §803.02 which govern the examination of Markush claims containing patentably distinct species.

Although the applicants respectfully disagree with the characterization of claims 18, 27 and 30 as containing an improper Markush group, in an effort to simplify the issues in the application, the third restriction requirement has been rendered moot by cancellation of the involved claims from the instant application.

In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt, favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned at (202) 624-2845 would be appreciated since this should expedite the prosecution of the application for all concerned.

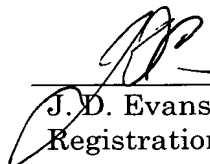
If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

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please charge any deficiency in fees or credit any overpayments to Deposit
Account No. 05-1323 (Docket #029310.52995US).

Respectfully submitted,

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